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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/974,881	10/12/2001	Takashi Nose	Q65614	7625

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EXAMINER	
NGUYEN, KIMNHUNG T	
ART UNIT	**PAPER NUMBER**
2629	

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/974,881	NOSE, TAKASHI	
	Examiner	Art Unit	
	Kimnhung Nguyen	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9 and 11-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *21-25* is/are allowed.

6)☒ Claim(s) *1-8,13 and 14* is/are rejected.

7)☒ Claim(s) *9,11,12 and 15-20* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This application has been examined. The claims 1-9, 11-25 are pending. The examination results are as following.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ogawa (US 6,597,339) in view of Jenkins (US 6,057,847).

Ogawa discloses in figure 1, a liquid crystal display (18) comprising a display panel; a back light (26) irradiating through the display panel; and a back light control circuit (24) controlling a brightness of said backlight (see back light drive circuit 24 can vary the luminance level of the back light 26, see column 4, lines 38-42), wherein said brightness of said back light is set to a first predetermined brightness when said display panel displays a dynamic image (see a plurality of adjustable luminance levels, and level 1indicates 100%, or highest luminance, see column 5, lines 14-26) and said brightness of said back light is set to a second predetermined brightness when said display panel displays a static image (see the luminance of the back light 26 is at level 1 (100%) is change to low level 2 (70%) because back light on a basis of the battery or lapse of time to save the power consumption, and levels association with images displayed on

the LCD, see figure 6, column 7, lines 50-54 and column 8, lines 14-17), wherein the first predetermined brightness is greater than the second predetermined brightness at a first period than at a second period (see the level 1is 100% and level 2 is 70%); wherein the back light control circuit said light based on an image discriminating, and a controlling (14) said the display panel in response to the images (see figure 1).

However, Ogawa does not disclose a ratio of an area of said display panel to an area of said dynamic image is smaller than a first threshold.

Jenkins discloses an image system having a ratio of a static occlusion area to dynamic emergence region area produce by an object (see col. 14,lines 4-7) and an inherent smaller than a threshold (see claim 20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the ratio of a static occlusion area to dynamic emergence region area produce by an object and is smaller than a threshold as taught by Jenkins into the system of Ogawa for producing the claimed invention because this would provide with low occluding efficiency produce little effective occlusion but result in a large emergence trail which incurs a high visibility search cost and decrease the computational cost of image generation (see col. 14, lines 7-9).

As to claim 2, Ogawa discloses further, wherein the back light control circuit controls said back light based on an image discriminating signal indicating whether an image to be displayed on said display panel is static as discussed above.

3. Claims 3-8, 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyachi (US 6,937,224) in view of Ogawa (US 6,597,339).

Regarding claim 3, Miyachi discloses in fig. 1, a liquid crystal display comprising: a display panel (11); a back light irradiating through said display panel; a back light control circuit (23) controlling a brightness of said back light; and a controller (20) controlling the display panel in response to an image discriminating signal indicating an active state when an image to be displayed on the display panel is a dynamic image and an inactive state when an image to be displayed on said display panel is a static image (see fig. 1, col. 19,lines 11-20), wherein

said back light is set to a brightness when said image discriminating signal indicates the inactive state, wherein the at least a part of said display panel displays a reset image (black image) only when the image discriminating signal indicates the active state (see fig. 1).

However, Miyachi does not disclose the first predetermined brightness may be greater than the second predetermined brightness.

Ogawa discloses in fig. 3, a first predetermined brightness is greater than the second predetermined brightness at a first period than at a second period (see the level 1is 100% and level 2 is 70%, see col. 7, col. 8, lines 14-17).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the a first predetermined brightness is greater than the second

predetermined brightness at a first period than at a second period as taught by Ogawa into the system of Miyachi for producing the claimed invention because this would provide the level of luminance may be altered on the basis of not only the current the current level of luminance but also the display content according to the currently executed process (see col. 8,lines 45-47).

Regarding claim 4, Miyachi discloses further the display panel comprises a plurality of cells, and wherein at least a part of said plurality of cells displays (see source driver and gate driver) a single color (black image) as the reset image (see fig. 1).

Regarding claim 5, Miyachi discloses further the display panel comprises: a scanning line (S1); a signal line (G1) arranged substantially perpendicular to said scanning line; and a cell arranged at an intersection of said scanning line and said signal line, wherein at least a part of said cell displays a single color as said reset image (see black image, see abstract).

Regarding claim 6, Miyachi discloses further the controller activates a first scanning line (S1) at a first scanning period (fig. 6) and provides an image data to a first signal line, and the controller activates a second scanning line at a second scanning period provides reset data to the first signal line, and wherein the first scanning period and the second scanning period are included in a basic period for scanning line (see fig. 1, see col.11, lines 45-59).

Regarding claim 7, Miyachi discloses further comprises at least one of a third scanning line arranged between said first scanning line and said second scanning line (see fig. 1).

Regarding claim 8, Miyachi discloses in fig. 1, further an input terminal receiving (20) the image discriminating signal and providing image discriminating signal to the controller and said back light control circuit (23).

Regarding claim 13, Miyachi discloses further an image discriminating unit receiving image data and providing the image discriminating data indicating said active state into said back light control circuit when the image data comprises dynamic image data, wherein the dynamic image data is data related to said dynamic image (see fig. 1, see col. 17, lines 37-57)

Regarding claim 14, Miyachi discloses further wherein the image discriminating unit provides the image discriminating data indicating said inactive state into back light control circuit when said image data comprises static image data, and wherein the static image data is data related to said static image (see col. 17, lines 37-57).

Allowable Subject Matter

4. Claims 21-25 are allowed.

5. Claims 9,11-12 and 15-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: None of the cited art teaches that a memory storing said first threshold value; and a detector and comparator detecting said ratio of said area of said display panel to said area of said dynamic image, comparing said ratio to said first threshold value, and providing said image discriminating

signal into said controller and said back light control circuit, wherein said image discriminating signal indicates said active state when said ratio is smaller than said first threshold value as claims 9, 11-12, or wherein said image discriminating unit comprises a memory storing said first part of said image data at said first frame, and a comparator comparing said first part of said image data with said second part of said image data at said second frame, and detecting that said image data comprises said dynamic image data when said first part of said image data is different from said second part of said image as claims 15-20, or when said dynamic image is displayed, to perform a dynamic display mode in which each of the scanning lines contained in at least a dynamic image displaying portion of said liquid crystal display panel is activated two times during one frame period and each of said signal lines is supplied with image data during one of said two times and with a signal unrelated to the image data during the other of said two times as claims 21-25.

Response To Arguments

7. Applicant's arguments with respect to claims 1-9, and 11-25 have been considered but are moot in view of the new ground(s) of rejection.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimnhung Nguyen whose telephone number is (571) 272-7698. The examiner can normally be reached on MON-FRI, FROM 8:30 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimnhung Nguyen

Patent Examiner

May 24, 2006